

## WEEKLY COMMENT OF THE RADIATOR

Frank Discussion of Motor Matters by The Times Automobile Editor

### AN UNPREJUDICED OPINION

A Column of Judgment on Issues Vital to Motor Car Owners.

By MONTE W. SOHN.

Gasoline is being made by the Rittman process at a cost of 6 cents a gallon, according to Dr. Thomas D. Norton, expert on chemical industries of the Department of Commerce.

Furthermore, Dr. Norton declares the Rittman process has put into the dim and distant future any fears that because of the increasing demand the supply of motor fuel will run out. The process, he says, insures a plentiful supply for all possible needs for years.

Development and utilization of the much heralded Rittman process had been practically lost sight of by the public, Dr. Norton, who follows closely all such industrial development, has prepared a statement in which he shows for the first time the vast possibilities of the process, many of which have already been realized.

**Price Just Raised Cent.**

His statement probably will hold more than usual interest for the motor car owners, who have just been called on to pay a cent more a gallon for gasoline in Washington.

Dr. Norton says:

"One of the notable features in the current general expansion of American chemical industries is the evolution of the Rittman process for transforming a large proportion of the residues of our petroleum refineries into gasoline, benzene, and toluene. The process, originated in the Bureau of Mines and elaborated as an industrial method under the auspices of the same bureau, has now issued from the experimental stage and taken its position as a recognized industrial asset in the nation's cycle of productive activity. By its aid vast quantities of petroleum waste, hitherto available for little beyond fuel purposes, can be transformed, either into gasoline for use in motor engines or into benzene and toluene, also susceptible of the same utilization, but constituting likewise the crude material for the manufacture of the two coal-tar high explosives—picric acid and trinitrotoluene—and forming also the starting points for the synthesis of an almost endless variety of dyestuffs, medicinals, photographic chemicals, artificial flavors, and perfumes.

**May Not Meet Demand.**

"Under normal conditions in times of peace the by-products of our coke ovens will more than meet the nation's demands in the manufacture of the latter categories of chemicals. The case is, however, far different in regard to the supply of motor fuel for automobiles, airplanes, and motor craft. Apprehension is felt that an early date the supply of gasoline from crude petroleum, or of benzene and toluene from the distillation of coal, may fall far behind the world's demand for motor fuel.

"The Rittman process promises to relieve entirely this anxiety, but at least postpone all danger of a shortage to a very distant date. Economically it will act as a healthful check upon any unnatural tendency to increase the price of ordinary gasoline. The process as now perfected makes it possible to produce gasoline at a cost of 6 cents per gallon. This figure may be contrasted with the current wholesale rate of 22 cents per gallon for gasoline obtained directly from petroleum refineries.

**Introducing American Process.**

"The process is thoroughly protected by patents. Manufacture in the United States is permitted without payment of license fees or royalties. Manufacture abroad is permissible under the patent rights secured in the different countries on the payment of a license fee. The American company controlling the patents is now actively engaged in introducing this new and distinctly American process in the leading foreign countries, where its advent is warmly welcomed. The establishment of the new industry in various quarters of the globe offers naturally an exceptionally admirable opportunity for American constructors to furnish the requisite plant and equipment.

"There is every indication that at an early date the American Rittman process will be well installed in all lands where petroleum refineries exist and will exert a widespread influence upon the production of all phases of transportation—terrestrial, aerial, and marine—dependent upon an abundant supply of gasoline."

### SECOND AUTO TALK GIVEN

Car Owners Get Pointers At Miller Bros.' Showrooms.

The second of a series of five lectures on the care and operation of an automobile was given last Saturday evening at 8 o'clock in the show rooms of Miller Bros., 1405 H street northwest.

The speaker, Charles Rabcock, covered thoroughly the manufacture of a car, its every part, and what function each has to perform toward the operation. The lecture was interesting and instructive to those who attended.

The third lecture in the series will be given tonight. Every part that goes into the make-up of a car will be discussed, and Rabcock expects to build an entire motor during this lecture.

In the remaining two lectures every unit of the car will be dealt with.

An information bureau will be conducted in connection with this series of lectures, open to the Washington public. Any question pertaining to an automobile if put into writing and left with or mailed to Miller Bros., 1405 H street northwest, will be answered by Rabcock and discussed at the lectures.

Every car owner in Washington is invited. Seats will be provided for all who attend.

### ELECTRIC TEST FOR BRASS

Process, Like Electroplating, Shows Percentage of Metals.

Much has been said of the care used by Dodge Bros. in selecting materials, but there is still a great deal to be told of the tests to which all material is subjected.

For instance, all brass and bronze used is carefully tested to ascertain the amount of copper and lead, and if the quantity is such that it might prove injurious, the entire consignment of metal is rejected.

The process of determining the "undesirable elements" is similar to the ordinary electroplating. Tech brass or bronze under test is dissolved in acid, and into this solution are placed two electrodes, consisting of platinum gauzes. A direct current is applied, and the resultant electrolytic action causes the copper to be deposited on one gauze and the lead on the other.

The weight of the deposit is then determined by an extremely delicate set of scales. Platinum electrodes are used because platinum is immune to the chemical action taking place during the electroplating. Incidentally, it might be mentioned that the little gauzes weigh considerably more than an ounce—and that platinum these days is worth from \$3.50 to \$4 a gram, and that there are twenty-eight grammes, of course, to the ounce.

### TIRE LIFE RECORDED BY NEWEST DEVICE

Hamilton Corporation Puts Out Multimeter, Which Also Acts As Speedometer.

Guarantees on tires are going to bear careful watching as a result of the announcement of the new Hamilton Multimeter for motor cars just put out by the Hamilton Corporation, of Lancaster, Pa.

This not only performs the functions of a speedometer, accurately records car speed, trip mileage and season mileage of each individual tire used, fuel consumption, gasoline consumption and gives warning signals at the end of first 1,000 and first 2,000 miles of operation, calls the attention of the car owner to the necessary adjustments which in every case add to service and efficiency if made at the termination of these two periods of turning in.

**New Device.**

The multimeter is an entirely new device, bringing an entirely new ability to the car owner to accurately determine cost of upkeep.

Exhaustive tests have shown it to be of watch-like accuracy, while owner reports emphasize the immense practical value of having an absolute check on the important item of upkeep and expense.

The records are obtained by moving an adjustable vessel ring until the indication desired is opposite the device used for setting the record; then the desired record appears on the dial of the instrument.

It has been examined by the majority of the leading automobile engineers of the country and has received practically universal commendation. It is achieving notable success among manufacturers and users of motor trucks and is hailed by many of these as the only solution to the true cost of operation.

**Single Cable.**

The instrument is driven by a single cable exactly as the present speed recording devices are driven, and is amazingly simple in construction, yet scientifically accurate in results obtained.

Robert E. Miller, secretary of the Hamilton Corporation, is authority for the statement that the Hamilton Multimeter was finally put on the market only after the most exhaustive tests—that in speed recording it shows absolute accuracy from 1 1/2 miles an hour to 80 miles an hour, the maximum indicative record, and that this same accuracy pertains to every record which it gives.

### RAILROADS TO USE AUTOS

Light Cars to Be Fitted With Gas Engines in California.

Castling about for an effective means to meet the competition of interurban motor buses and trucks, several railroad men of California are bailing their hopes on the success of a new car which is being built at Sacramento, says the Power Vagon.

This car is unlike anything yet tried on the Coast. It is, in principle, an experiment in fitting an automobile engine to a light car body. While the entire car will weigh but seven or eight tons when complete, it will carry a total of 3,750,000,000 ton-miles annually. A fair average cost of hauling by horse-drawn vehicles is placed at 20 cents a ton-mile, and this would make the truck's accomplishment worth \$750,000,000.

The 25,000 commercial motor vehicles average fifty miles a day with an average load of two tons, giving a total of 3,750,000,000 ton-miles annually. A fair average cost of hauling by horse-drawn vehicles is placed at 20 cents a ton-mile, and this would make the truck's accomplishment worth \$750,000,000.

What they are looking for is a gasoline car that will run on the steel rails, that will start and stop quickly, be of light weight and have ample tractive power. As far as the electric lines are concerned, this car, it is hoped, will dispense with the necessity for overhead wire or third rail equipment with much of the traffic.

The experimental car is thirty-five feet five inches long and eight feet wide. The engines are of 60-horsepower. Entrance to the car is to be from the side. Any chauffeur can run it, as the operation is precisely the same as that of an automobile except that no steering is necessary. The equipment includes parlor car, chairs, a smoking and baggage room and a lavatory. One novel feature is that the wheels are to be of hickory, with steel rims shrunk on.

ASK FOR and GET  
**HORLICK'S**  
THE ORIGINAL  
**MALTED MILK**  
Cheap substitutes cost YOU same price.

### COMBUSTION FLAW IN MODERN MOTOR

Expert Claims That Great Proportion of "Gas" Is Wasted.

Those who feel that the modern gasoline engine as used in present day automobiles is well nigh perfect will be surprised to learn that Prof. Walter T. Fishleigh, associate professor of automobile engineering at the University of Michigan, after making exhaustive tests on the efficiency of the internal combustion engine, has come to the conclusion that the more we study the characteristics of the present type (of engine), and the more we inquire into the reason for its manufacturing "status quo," the more we are convinced that sweeping improvements in design must come, or the type be changed altogether.

The conclusions which Prof. Fishleigh has drawn in his paper, which is to be presented at the annual meeting of the Society of Automobile Engineers on January 31, are the result of elaborate tests which show that out of every dollar's worth of gasoline purchased by the owner of a modern automobile, only 10 cents' worth of power is developed at the flywheel and delivered to the transmission box. The other 90 cents' worth of power is dissipated in the form of heat losses to the exhaust, cooling water, cooling air, and friction. Prof. Fishleigh predicts that radical changes must be made in the design, or that the present type must be discontinued in favor of a more efficient system of internal combustion engine.

When it is realized that the present-day gasoline engine develops more than double the power for a given quantity of gasoline than that obtained from the engines of a decade ago, the inefficiency of operation of the old type of machine can well be realized.

### AUTO TRAFFIC HEAVIEST

Carry More Than Steam Railroads in the Country.

That motor cars are giving a greater passenger transportation service than the entire steam system, or all the urban and inter-urban electric roads of the United States was the statement made by Alfred Reeves, general manager of the National Automobile Chamber of Commerce, before the Automobile Club of America. He based his statement on figures from the Bureau of Railway Economics.

Reports for 1914 showed that the steam railroads carried 1,053,000,000 passengers an average total distance of 33.61 miles, or a total of more than 35,000,000,000 passenger miles and earned \$700,400,000 for this service. The mileage has increased little since then, according to the Bureau of Railway Economics.

The 3,250,000 passenger motor cars now registered in the country average 5,000 miles a year, and at the conservative estimate of three passengers to a car give a service of 48,750,000,000 passenger miles. This would be worth \$975,000,000 on the railroad basis of 2 cents a mile, or \$200,000,000 more than the railroad passenger service.

The 25,000 commercial motor vehicles average fifty miles a day with an average load of two tons, giving a total of 3,750,000,000 ton-miles annually. A fair average cost of hauling by horse-drawn vehicles is placed at 20 cents a ton-mile, and this would make the truck's accomplishment worth \$750,000,000.

## DONOHUE'S GARAGE

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Let us sell you a Ford—we can arrange satisfactory terms. Having finished our modern, fireproof Garage, located at 215 Pennsylvania Ave. S. E., we invite your inspection of same. We have a complete line of accessories for your Ford.

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### FIAT TO ENTER RACERS

Italian Company Will Enter Two Cars at Indianapolis.

The decision of the Fiat company, of Turin, Italy, to enter two Fiat racing cars at the Indianapolis meet next Decoration Day is conclusive proof that European countries have not lost interest in the automobile industry in America, and that they are eager to maintain their prestige in America.

It has been known for some time that Fiat has been developing new racing cars, and that these have been under test for the past year. They have been given severe usage for months, the Fiat pursuing its former policy of severe testing.

It is known that other concerns are much interested in the American speedway racing circuit, but that war conditions have made it impossible for them to build special cars. The details of the new Fiat are not yet available.

### TIRE COMPANY WILL ASSIST DEAF MUTES

Gives Opportunity to Each Employee to Improve His Education.

In line with the recent announcement to Goodyear Tire and Rubber Company employees that the scope of the company's factory schools would be enlarged and opportunity extended to every workman to improve his education, a new division of the school has been inaugurated for deaf mutes. Goodyear thus becomes the first of the great industrial concerns of the country to provide special educational advantages for these "silent" workers.

A preliminary canvass shows that the subjects most interesting to them are business arithmetic, English and mechanical drawing. Accordingly these will be the first subjects to be taught—with others added with the growth of the school. To direct the activities of the new undertaking the company has employed Mr. Aahland D. Martin, himself a deaf mute and a graduate of Gallaudet College.

About 200 of these "silent" workers are now employed at the Goodyear plant. Their expertise in building and finishing tires and their general efficiency as workmen bear evidence that their peculiar affliction need not constitute a handicap in the battle of life.

Shut out from many of the amusements and pleasures that appeal to their more fortunate brothers, they show unusual interest in athletics of all kinds. The development of their physical powers through general participation in athletic events, stamps them as one of the sturdiest groups of workmen in the entire plant. However, that their interests are not confined exclusively to physical matters is shown by the recent organization of a Deaf Mute Literary Society. The features of the meetings of this society are animated, but noiseless debates, readings, dialogue, etc.

A new announcement of the opportunities now open to them to further their education and increase their efficiency as workmen, through the agency of the factory school has been greeted with much enthusiasm. Practically the entire force of mutes is contemplating enrollment.

### MISS THURSTON TO SPEAK.

At the vesper services at the Women's Christian Association, Sunday afternoon, Miss Mabel N. Thurston will be the speaker and Mrs. H. C. James will be the soloist with Miss Frances Chickering at the piano.

### OVERLAND MEN USE MANY DIAMONDS

Precious Stones Play Important Part in Manufacture of Cars.

Diamonds are sacrificed with generous hand in the interest of mechanical accuracy at the Willis-Overland factory in Toledo. Enough of the precious stones to equip a dozen prima donnas with tiaras or necklaces of wondrous splendor are literally ground to nothing on the emery wheels used in finishing vital parts of Overland and Willis-Knight cars.

The diamonds are used to "true up" emery wheels. Nothing else is hard enough.

In the wet-grinding department, with its hundreds of grinding and milling machines, 300 to 1,000 uncut stones are kept constantly in stock. No jeweler is more careful in the selection of his wares, than the diamond buyers of the company. As a rule the diamond stocks are replenished in \$15,000 lots.

When a crank shaft or a cam shaft has been "rough ground" it is turned over to the finishing machines. Utmost care is exercised to see that the parts come up to requirements, even to a .0005 of an inch. This is where the diamonds play their important part. Inasmuch as the slightest imperfection of the cutting surface of the wheel is reproduced on the work, an absolutely true wheel is necessary in these grinding jobs. The diamond provides a method of making the wheel a true cylinder; and at the same time produces any kind of a surface desired. The diamonds, generally used for wheel grinding are of five classifications: Brown borz, gray borz, Jagers, Fontain, Ballas, and black carbons.

Besides crank shafts and cam shafts, wrist pins, spacers, push rods, spring brackets, pump shafts, generators, drive shafts, idler gear shafts, and steering work gears are parts in the accurate grinding of which the diamond plays an important role.

### MOTOR CARAVAN COMING

Will Carry California Delegates to Ad Men's Convention.

San Francisco will send a motor caravan East, leaving the city by Golden Gate on May 23, carrying the California delegates to the Ad Men's Convention, which will be in session in St. Louis during the week beginning June 3, 1917. The caravan will arrive in ample time to get the delegates to the convention, and, incidentally, see a big part of the country en route.

Although the motor tourists from the Pacific Coast will not visit Indiana, which State sent the Indiana tourists to San Francisco in 1912, still they will consider that they have returned the visit of the Eastern motorists by their West to East motor trip next spring.

Wishing to call the attention of the country to the touring possibilities of California and the West, the San Francisco motor caravan will be prepared to spread abroad reliable and interesting information regarding travel conditions, routes, passes over the mountains, and road conditions to all those who wish to know.

Starting from San Francisco, the twenty cars which will make up the caravan will follow a regular schedule, and will plan their run so as to make the best speed consistent with road conditions, etc. The entire motor caravan will be in charge of a director, who will be responsible for the maintenance of order and the observance of all tour rules.

### TO HAVE AUTO PARK

New York Company Will Erect Individual Garages on Large Tract.

New York is to have a "garage park." It is planned by the newly formed Dyckman Auto Homes Corporation, Casper S. Rosenheim, president, which has taken a long lease of the twelve lots on the west side of Amsterdam avenue, between Academy and 204th street, in the Dyckman section. The company will immediately begin the erection of 100 individual garages, with special facilities for owner-driven cars. There will also be built stores for dispensing automobile needs. Part of the proposition will be reserved for improvement with public garages.

The location is accessible to upper Manhattan, the Bronx and Yonkers, as well as the Dyckman street ferry, connecting with New Jersey. The property was leased to N. Gitterman as broker for the Romney Realty Company. Since the new zoning law went into effect last July there has been a scarcity of garage space all over town. The law prevents the erection of garages in residential and business sections. The property secured for the new project is unrestricted.

### SERVICE STATION SOON TO BE READY

Jeff Combs Plans Big Season With His Line of Chalmers and National Cars.

If one evades the neck-breaking scaffolds, ladders, and "horses" cunningly concealed by canvas and keeps his feet out of the promiscuous paint buckets which are all over the place, one gets to Jeff Combs' private office on the balcony of the Combs' Motor Company's salesrooms.

The Times Automobile Editor, who suffered seven or eight paint spots and a bruised shin succeeded in reaching the lofty sanctum of The Gentleman from Ohio, on Tuesday morning.

J. C. commiserated with the writer for a while and then talked plans. After the epidemic of paint and polish and sawdust is over; after the last carpenter and brush slinger beats it for parts yon, the new organization of the Combs' Company takes hold of the problem of how to separate prospective buyers from deposits.

There is an entirely new sales staff which is most apropos with the 1917 models Chalmers and National now in the Combs Service Station.

Combs, on a recent visit to Detroit plucked one of Chalmers' star service men in F. A. Palmer, and brought him to Washington.

Palmer comes highly recommended as a specialist in settling the problem "What's the matter with my car?" and has started his new work by building up a new organization in the service station.

### NAME VIBRATION IMPORTANT

Dr. Powell Declares It Influences Life of Child.

Does your name vibrate with that of your parent?

If it does not, you are negative, according to a speech delivered last night by Dr. Louise Cutts Powell, at the Portland Hotel. "Never let anyone outside the family name the child; do it yourself, and do it before the child is born," she said.

Dr. Powell gave the reason why children do not get along with their parents. It is very simple when explained. The reason is, stated Miss Powell, they have been named wrong. The name of the child, she said, should harmonize with that of the parent, as a wrongly named child goes through life handicapped.

### CHEVROLET EIGHT TO APPEAR SOON

New Car on Display in Baltimore and Is to Be Shown Here Before Long.

The latest Chevrolet, the "eight," is on display at Baltimore's motor show, and will probably be seen in Washington within the next month. It is certain to meet with big approval by American motorists.

The car, when production reaches the stage where general sales are possible, will sell for \$1,385.

The line, so far as present plans go, includes only a four-passenger touring car and a four-passenger roadster.

**Engage Clutch Freely.**

The Cone clutch, leather faced, has ten springs under the leather to permit it to engage easily with the motor and compensate for friction. A unique feature of the clutch is the oiling system. There is a cored bronze collar holding a cupful of oil which passes through the hub, lubricating the entire mechanism.

The light-cylinder motor is one of the lightest multiple cylinders yet produced. Valves are overhead and circulation is by pump system with large capacity cellular radiator.

**Steel Used Liberally.**

Vanadium steel has been liberally used throughout the chassis.

The equipment is complete to the last detail. It consists of a one man weather proof top and side curtains, with Bahr brackets; speedometer, starting system, six-volt storage battery, single wiring system, sixteen-candlepower headlights, two-bulb dimmer tire carrier, license holder, superior service kit containing tools, tire pump, tire repair kit, spark plug wrench, hub cap wrench jack, and inspection lamp. The windshield is of special design, with bright nickel and mahogany finish. The cowl is equipped with a special air venting system to the cooling of the motor compartment.

### TO CARD INDEX MORALS

Efficiency Methods Applied to Task of Codifying Ethics.

For the first time in history, perhaps, modern efficiency methods have been applied to the task of card indexing and cataloging morals.

This unusual undertaking has been fostered by the National Institution for Moral Instruction, Inc., which includes among its board of directors Milton Fairchild, chairman; P. P. Claxton, Willard S. Small, Dr. William C. Ruediger, and Margaret Bell Merrill, all of Washington.

The institution inaugurated some time ago a "morality codes competition," which will close on Washington's Birthday. Seventy code writers were appointed, one or more in each State, and hundreds of other persons have been helping in the work.

"Consultations by code writers have been had with all sorts of people, but especially with parents who have succeeded in bringing their children up well," an announcement states.

The codes are to be mailed to C. K. Mellen, at a Buffalo, N. Y., high school, and by him numbered, and then submitted to a board of judges. The prize for the winning code is \$5,000.

### POSTAL CIVIL SERVICE.

By an amendment to the legislative appropriation bill offered by Senator Poinsett and adopted by the Senate, all postmasters will come under the civil service laws.

Postmasters now serving automatically come under civil service without taking a further examination.

Such Details as the Simple Rocking Gear Shift Lever

indicate the high-grade equipment of Velie Biltwell Six—not surpassed in cars at any price. Long and powerful emergency brake. Foot pedals, clutch and service brake adjustable to driver. With the Velie Special Continental motor—Timken axles front and rear—long, underslung springs—roomy body—genuine leather upholstery—it is the Six that satisfies.

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